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ABSTRACT

This guide is intended to help educational planners in building partnerships between educators teaching courses in electrical occupations and the business, industry, and labor sectors of their communities. The guide, which is written in outline form, includes concept statements, explanations of concept statements, examples, and step-by-step procedures for utilizing concepts to achieve the following objectives: establishing the need for a partnership, defining education's expectations, identifying what industry is willing to contribute, identifying the partners in a cooperative program, establishing common goals and objectives, utilizing a plan of work, and maintaining the partnership. Appended to the guide are a list of goals for partnership; a proposal for sharing with business, industry, and labor; a resource directory information collection instrument; a list of the duties of a project monitor; questions for use in collecting evaluation information; and two follow-up surveys. (MN)

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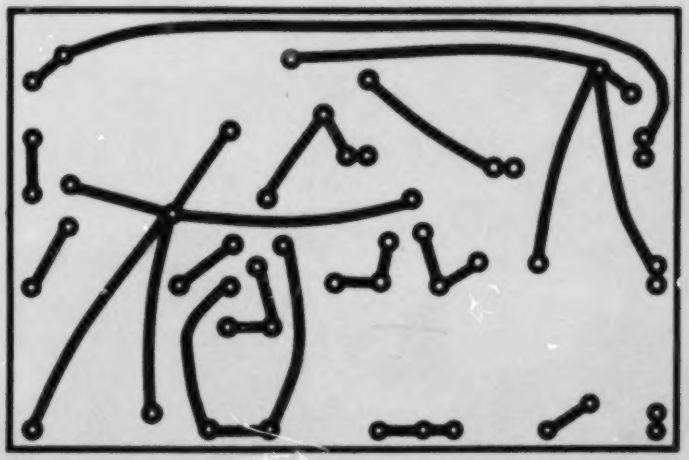

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PORTLAND PUBLIC SCHOOLS

ELECTRICAL OCCUPATIONS PARTNERSHIP GUIDE

DEVELOP AND IMPLEMENT MODEL
ELECTRICAL CLUSTER PROGRAM

GRANT NO. 26-001-995
VEC. NO. 20-462

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OCTOBER, 1983

OREGON DEPARTMENT OF EDUCATION
CAREER AND VOCATIONAL EDUCATION DIVISION

PARTNERSHIP PLANNING GUIDE

INTRODUCTION

RATIONALE FOR PARTNERSHIP

The purpose of vocational education in secondary schools is to prepare students for entry into the world of work. This preparation involves technical skills training, a knowledge base within an occupational cluster, and an attitude that will enable the student to get and hold a job. This preparation for work requires a diversity of learning experiences that is greater than can be delivered in a single school setting.

The dynamic nature of the workplace is accelerated by rapidly changing technologies and new, emerging occupational needs. To stay abreast of the technological needs of our society, schools must work in close cooperation with business, industry, and labor. If schools expect their "products" to be employed by business, industry, and labor, these groups must be involved in setting the standards for job entry. This means that business, industry, and labor must be involved in planning and evaluating the training program.

Involvement of business, industry, and labor in the educational process requires a climate of good faith between all involved participants. The key to establishing an effective partnership is human relations. Until a climate of good faith is well established, those staff members with good human relations skills should provide leadership in working with the community. For the same reason, the initial efforts should involve firms and agencies that have a good attitude toward the educational system.

Successful vocational programs are those that are well supported by business, industry, and labor groups. These groups recognize the potential of programs in the context of their own business. Completors of quality programs offer business, industry, and labor a way to increase their own productivity and profits. At the same time, educators are successful if the completors are employable in the jobs for which they were trained.

With a common goal of productive employment for our young people, education must develop a partnership with business, industry, and labor. Cooperatively, they must identify the requirements for entry level employment. Business, industry, and labor must keep the schools informed about technological changes affecting curriculum. They must encourage and support the delivery system that prepares young people with the skills, knowledge, and attitudes needed in a work environment.

A true partnership is one in which the partners are open and honest with each other, respectful of each others problems, and cooperative in reaching a common set of objectives. This type of partnership is needed if education, business, industry, and labor are to fulfill their role in training young people to increase the productivity of our country.

Within our competitive world markets, productivity has become a national concern that will affect our standards of living and overall quality of American life. This concern cannot be addressed by isolated segments of Americans but will require a unified effort of the training institutions and the users of the human resource. The United States can no longer afford the luxury of non-cooperation in the development of its human resources. A sincere, working partnership must be developed between the education, business, industry, and labor sectors of our society.

PURPOSE OF THIS GUIDE

This guide is intended to help educational planners in building "partnership" bridges with the business, industry, and labor sections of their communities. Guidelines for planning, developing, and maintaining partnerships will be presented, and sequential steps of involvement will be outlined. This guide is directed toward the establishment of long-range, on-going partnerships that extend beyond the involvements of the traditional advisory committee.

The content of this guide will establish the needs for having a partnership and define the expectations of each partner. The guide is designed to help a user in planning a partnership based on actual needs.

This guide offers assistance in setting up a partnership, establishing common goals and objectives, developing a plan of work, and implementing the planned activities. Suggestions are offered to help educators in maintaining an on-going relationship with business, industry, and labor through systematic evaluation and improvement of a plan of work. A resource listing will make it easier to contact and work with business, industry and labor. This guide should provide the directional steps to enable the user to enter into partnerships that will improve the quality of vocational programs, provide graduates with better career options and improve the quality of our work force.

Since the attitude between a school district and its community is not a matter that can be mandated by any authority, this guide can only help those with a sincere desire to bridge the gap between the education and the work world. For those who choose to become a partner, the guide offers field-tested approaches to developing a partnership.

Special recognition for the work that went into this guide is extended to Carol Matarazzo, Project Director; Burr Fancher, Special Consultant to the Electricity-Electronics Guide; and Ellen Sweet, Editor and instructor at Vocational Village High School.

INFORMATION IN THE GUIDE

The information in this guide is presented in a format that allows quick referencing and ease of reading. Each section of the guide contains the following parts:

1. Concept Statements
2. Explanation of Concept Statement
3. Examples
4. Step-by-Step Procedures for Utilizing the Concept
5. Referenced Appendix Items to show examples of forms, products, and formats used in accomplishing procedural steps.

Users of this guide are encouraged to read each concept statement (in boxes) and the explanation of its importance and examples. If in agreement with the statement, the reader should proceed to the specific steps that explain how the concept can be used. If the reader fully understands the concept and disagrees with its intent, little can be gained by further reading.

The appendix contains ideas for formats to be used in communicating between the members of the partnership. These formats can be adapted to meet local needs.

PARTNERSHIP PLANNING

ESTABLISH NEED FOR HAVING A PARTNERSHIP

Identify Need for Curriculum Change and Update

CONCEPT #1

> Partnership efforts are needed to assess vocational programs and identify needed changes and updates in curriculum.

EXPLANATION OF CONCEPT

Rapidly changing technologies make it increasingly difficult for instructors to keep their curriculum up to date. In some cases, they may lack in know-how for dealing with new technology. In other cases, the school may lack the equipment needed for delivery of the training in the new technology. In either case, business, industry, and labor can help to fill the gap.

EXAMPLE

Digital circuitry is a good example of technological change that requires instructors to learn new theories and a new set of applications in electronics.

PROCEDURES

1. Develop a task inventory checklist that identifies the skills, knowledges and attitudes needed for entry-level employment.

2. Validate task inventory checklist by having a cross-section of business, industry, and labor representatives respond according to their needs.

3. Conduct interviews with managers of business, and labor to establish working relationship with firms.

Indentify Need for Curriculum Change and Update (cont.)

PROCEDURES (cont.)

4. Summarize management interviews and task inventory returns to achieve a composite of business, industry, and labor needs.

5. Compare results with existing training program to identify gaps in curriculum.

6. Confirm curriculum needs with program advisory committees

Determines Changes That Can Be Assisted By Business, Industry, and Labor

CONCEPT

#2

All needs cannot be met by business, industry, and labor assistance, but many mutual needs are appropriate for partnership efforts.

EXPLANATION OF CONCEPT

Our expectations of industry are sometimes exaggerated beyond what is possible for it to provide. Likewise, industry's expectations of our graduates shows little understanding of human problems encountered in our schools. Therefore, a careful sorting of our needs should be made. We should identify those changes that can be expedited by the involvement of business, industry, and labor.

EXAMPLE

The model for Training/Retraining of Industry Employees at Clatsop Community College defines a process for identifying the needs of industry and what can be provided by the industry sector for electronics programs. The Clatsop model is highly applicable to the involvements of secondary school systems with business, industry, and labor.

Determines Changes That Can Be Assisted By Business, Industry, and Labor (cont.)

PROCEDURES (cont.)

1. Review the curriculum needs with program advisory committee.
2. Have advisory committee identify areas appropriate for involvement of business, industry, and labor.
3. Identify:
   a. What needs to be changed.
   b. How it should be changed.
   c. When changes should occur.
   d. Who needs to be involved.

Identify Those Changes of Mutual Benefit

CONCEPT

#3

A long lasting Partnership must offer benefits to all partners.

EXPLANATION OF CONCEPT

Each activity of a partnership must be analyzed according to the benefits that will be returned to each partner. If one partner feels that (s)he is giving more than (s)he is receiving, the attitude of cooperation becomes tarnished. Maximum gains occur when partners are working on mutual interests.

EXAMPLE

An articulated model for electronics was developed among 3 community colleges, 3 secondary school districts, a skills center and the electronics industry in South Central Alaska. This project determined that the industry had dire need for its employees to be updated in digital circuitry. In fulfilling this need for updating the industry, community college and secondary instruction gained many benefits for their curriculum and programs.

Identify Those Changes of Mutual Benefit (cont.)

PROCEDURES

1. Weigh each proposed activity according to:
   a. Specific benefits for education.
   b. Specific benefits for business, industry, and labor.
   c. General benefits for society.
2. Discuss benefits with partners to assure that all are in agreement.

Make Priority List of Needs According to Payoff Value

CONCEPT

#4

A partnership should concentrate on those cooperative activities that offer high payoff.

EXPLANATION OF CONCEPT

Time will not allow us to deal with all of the needs that confront vocational education. Partnership efforts should be directed toward those that offer high-payoff rather than those that assume high priority but possess low-payoff potential. Payoff is essential for keeping a partnership in an active, vital state.

EXAMPLE

Curriculum revisions that respond to dramatic changes in technology; for example, digital electronics offers a high payoff to both education and industry and should be regarded as high priority. On the other hand, administrative problems, e.g., basic grant application approval, may be a high-priority mandate, but in itself offers low payoff to a partnership. Such items should not be considered as goals of the partnership.

Make Priority List of Needs According to Payoff Value (cont.)

PROCEDURES

1. Place each Proposed need into its proper perspective according to the following chart:

	Low Payoff	High Payoff
Low Priority		
High Priority		

2. Select partnership activities according to payoff value.

DEFINE EDUCATION'S EXPECTATIONS

Identify Expectations for Human Resource Involvement

CONCEPT #5

> Members of business, industry, and labor have a wealth of technical expertise to share with schools if specific needs for human resources can be defined.

EXPLANATION OF CONCEPT

Business, industry, and labor can provide technical resource persons to vocational programs if the needs are clearly identified and related to the instructional process. Resource persons should be identified to complement the instructional program. Other human resources are involved in career exploration visits to business and industry, field trips with classes; and serving on advisory committees. The nature and level of need for business and industry to contribute their human resource should be defined. Care should be exercised to assure that excessive demands are not placed on

EXPLANATION OF CONCEPT (cont.)

time resources of business, industry, and labor. If many schools are involved in this type of contact with the community, requests should be coordinated through an Education Service District or comparable units. Expectations for their involvement should be defined in terms of purpose, time, and expected outcomes prior to their becoming involved. An honest agreement insures a lasting partnership.

EXAMPLES

Polk and Yamhill County Education Districts have cooperated in the development of a Resource Persons Directory for use in all areas of elementary and secondary education. The development and use of the directory are monitored by regional staff. Other regional directories have been developed to promote involvement of community in local schools, e.g., Jackson ESD, Marion ESD, Linn-Benton ESD.

The Chamber of Commerce and National Alliance of Business can be most helpful in identifying community resources. In Portland and other communities, these organizations have education committees which work on worthy projects.

PROCEDURES

1. Review curriculum.
2. Identify units that can be enhanced by use of resource person.
3. Identify units that can be enhanced by a field trip to a work site for career exploration.
4. Identify other human resource needs such as advisory committee members, technical consultants, CWE sites, etc.

Identify Expectations for
Human Resource Involvement (cont.)

PROCEDURES (cont.)

5. Make a listing of human resource needs to include:

   - Subject area
   - Occupation or skill/ knowledges to be conveyed
   - Dates and times
   - Conditions or special considerations

6. Ask advisory committee to assist in identifying resources to meet needs.

7. List (in directory format) those persons identified by advisory committee:

   - Firm
   - Name
   - Address
   - Telephone
   - Occupation
   - Area of specialization

Identify Expectations for
Fiscal Contributions

CONCEPT

#6

Business and industry sometimes support vocational programs by donating equipment and through other types of money contributions. Care should be exercised in making fiscal demands of partners in business, industry and labor.

EXPLANATION OF CONCEPT

Some businesses and industries are reluctant to become partners in the educational process if they suspect that the partnership is motivated by education's desire to expand its budget allocations. Although business and industry provide equipment, facilities, and human resources for many vocational programs, such contributions usually result from

Identify Expectations for Fiscal Contributions (cont.)

EXPLANATION OF CONCEPT (cont.)

their involvement in planning and implementing curriculum. Fiscal contributions should not be a primary expectation of our partners in business and industry. If such contributions are expected, they should be clearly defined during the planning of the partnership so that the partners are both aware of each other's motives. To do otherwise is deceitful and results in unhappy partnerships.

EXAMPLE

A photo-graphics communication advisory committee has provided Crescent Valley High School with several pieces of specialized equipment. These donations resulted from the members' commitment and interest in the program. The purpose of the committee was to develop an up-to-date curriculum and not to solict equipment from the community, although the equipment was a positive outcome of industry cooperation.

PROCEDURES

1. Identify specific areas of assistance where business and industry is expected to provide:

   - Facilities
   - Equipment (loan or gift)
   - Materials and supplies
   - Resource people for speakers, field trips, and advisory committees
   - Other contributions that require cash outlays by business and industry

2. Review these expectations with the advisory committee to determine if:

   - Expectations are valid.
   - Expectations are within reasonable limits.

Identify Expectations for
Fiscal Contributions (cont.)

PROCEDURES (cont.)

3. Define specific expectations of business, industry, and labor in regard to fiscal contributions expected by the educational agency.

IDENTIFY WHAT EDUCATION IS WILLING TO CONTRIBUTE

Identify Human Resource to be
Allocated to the Educational Agency

CONCEPT

#7

Business and industry are more willing to contribute their own time if they can see the same willingness among educators.

EXPLANATION OF CONCEPT

We must clearly define the human resources that will be contributed by education to fulfill the goals and objectives of the partnership. Our contribution must be equal to or greater than what is expected from the partners. If this image is not projected, we cannot expect enthusiam from business, industry, and labor.

EXAMPLE

Education asks business and industry to provide work stations for cooperative work experience students. Cooperation is greatly enhanced if the school has committed staff time for its own part in supervision and evaluation of the students.

PROCEDURES

1. Identify who will be involved from he schools.

2. Define what each is willing to contribute to the partnership, especially after-hours work.

Identify Fiscal Resources to be Allocated by the Educational Agency

CONCEPT #8

Program commitment is usually reflected in the budget allocations of that program in relation to other programs in the school. Partners should have an honest picture of education's commitment to the program.

EXPLANATION OF CONCEPT

If we expect a serious partnership to be developed, we must examine our own commitment to a program. Regardless of budget problems, allocations must reflect a true concern for the welfare and success of that program as related to the total instructional setting. An honest sharing of fiscal commitment encourages business and industry involvement.

EXAMPLE

Phoenix High School operates an on-site construction program that uses the advisory committee as a Board of Directors in building a 3-bedroom dwelling each year. The school pays the instructor, and the advisory committee pays the construction costs. The house is sold by the advisory committee, and all profits are returned to the students as scholarships.

PROCEDURES

1. Review the program budget and assess the fiscal commitment of the school district to programs.
2. Be prepared to make positive responses about program allocations to potential partners from business, industry, and labor.

Identify Educational Goals for Cooperative Effort

CONCEPT

#9

A cooperative effort must be directed toward educational goals if it is to be successful.

EXPLANATION OF CONCEPT

Goals for the partnership must be clearly identified before making contacts with business and industry. The goals must be defined in terms of improving the instructional program for students.

EXAMPLE

See Example list of goals in Appendix A.

PROCEDURES

1. Identify instructional goals that need the support and assistance of business, industry, and labor.

2. Make a priority list of goals according to their appropriateness for involvement of business, industry, and labor.

3. Identify needs for each goal:

   - Needs that can be met only by education.
   - Needs that can be met only in the community.
   - Needs that can be met only by cooperative action.

4. Propose how needs may be met with cooperation of business, industry, and labor.

Complete a Proposal for Sharing With Business, Industry, and Labor

CONCEPT

#10

A brief written proposal is an effective document for communicating with potential members of the partnership.

Complete a Proposal for Sharing
With Business, Industry, and Labor (cont.)

EXPLANATION OF CONCEPT

Although oral communication is encouraged, a written document defining the rationale, goals, and specific needs for forming a partnership is effective in communicating our position to the business, industry, and labor sectors. The written proposal provides the opportunity to study and analyze their potential contributions to the partnership.

EXAMPLE

An example proposal is included as Appendix B of this guide.

PROCEDURES

1. Provide a rationale to include:
   - Why the partnership is needed.
   - What the school will contribute.
   - What is expected from business, industry, and labor.
   - What the benefits are.
2. List the instructional goals to be supported by the partnership.
3. List educational resources available to the partnership, i.e., budget, equipment, and environment.
4. List the needs for each instructional goal.
5. Propose ways in which business, industry, and labor can help to meet each goal.

IDENTIFY THE PARTNERS

Compile a Directory of Firms and Agencies

CONCEPT #11

A directory make contacts easier to make and promotes use of community resources.

EXPLANATION OF CONCEPT

A great deal of time can be wasted in tracking down individual firms or agencies each time a specific need arises. Using categorized listings of firms according to products or services makes it easy for instructors to contact the appropriate firm.

EXAMPLE

An example of how to collect directory information is found in Appendix C.

PROCEDURES

1. Obtain a Directory of Oregon Manufactors that lists all manufactors of products by:
   - City
   - County
   - Standard Industrial Classification
2. Obtain a telephone directory of yellow page listings of services for your geographical area.
3. Use instructors, advisory committee members, and other school staff to identify firms that are interested in a partnership with the school

Compile a Directory of Firms and Agencies (cont.)

PROCEDURES

4. Make your own directory of resources to show:

   - Firm name
   - Address
   - Telephone
   - Contact person
   - Products and/or services of company

5. Compile and bind resource directory for quick reference and use in making contacts with business, industry, and labor.

6. Select a cross-section of electrical and electronic firms if the number of firms is too large.

See Appendix D for steps in sample identification.

Identify A Key Contact in Each Firm

CONCEPT

#12

Good relationships result from the application of human relations and techniques. These techniques should be directed toward key people who can speak for their firms.

EXPLANATION OF CONCEPT

It is easier to build solid relationships with management personnel who can make decisions for their firm. Key contacts should be identified from the decision making levels of business, industry, and labor. Once this relationship is established, it opens access to all levels of staff and technology in that firm.

Identify A Key Contact in Each Firm (cont.)

EXAMPLES

Associated Oregon Industries acts as a central coordinator for all firms that manufacture electrical and electronic products in Oregon. This Salem-based organization can provide names of key contacts in industry.

PROCEDURES

1. Identify a person in the firm's management that is interested in education and training.

2. Identify by:

   - Name
   - Firm
   - Address of office
   - Telephone number
   - Position or title of contact

Organize an Advisory Group

CONCEPT

#13

An advisory group of business, industry, and labor representatives can be very helpful in giving direction to the formation of a partnership.

EXPLANATION OF CONCEPT

An advisory group can help education by establishing guidelines for approaching new firms, recommending contacts within firms, and serving as a support group for the partnership effort.

EXAMPLE

Appendix E shows a checklist for use of advisory committee.

PROCEDURES

1. Identify a select group of key people from the directory.

2. Invite 5-9 of these people to serve as an advisory committee.

3. Meet with group and orient member as to your plans.

Organize an Advisory Group (cont.)

PROCEDURES (cont.)

4. Solicit advice on the best way to develop a partnership with business, industry, and labor.

5. Use advisory committee recommendations as guidelines for involvement with business, industry, and labor.

6. Use the advisory group as an on-going committee for planning, developing, and maintaining a partnership.

7. Use advisory committee handbook from Oregon Department of Education as a guide for organizing and operating advisory committees.

This guide contains the specifics needed for operating effective committees.

ESTABLISH COMMON GOALS AND OBJECTIVES

Interview the Managers

CONCEPT

#14

All aspects of a partnership should be explored with the managers of business, industry, and labor including expectations of and benefits to each partner.

EXPLANATION OF CONCEPT

If a partnership is to succeed, each partner must have a clear understanding of the needs for having a partnership, the conditions under which a relationship is possible, and what each person will contribute to make it a success.

PROCEDURES

1. Set up interview schedule with managers of business, industry, and labor.

Interview the Managers (cont.)

PROCEDURES (cont.)

2. Use an interview guide to assure consistency in the information collected. See Appendix F for sample interview guide.

3. Use interview guide questions as probes for discussion and to determine willingness to participate.

4. Make notes on each point in interview guide so that conclusions can be made from interviews.

5. Analyze summaries of management interviews.

6. Identify those objectives that received support from business, industry, and labor.

UTILIZE A PLAN OF WORK

Develop a Plan of Work

CONCEPT

#15

A plan of work provides all partners with a framework for cooperative action.

EXPLANATION OF CONCEPT

Plans serve as "blueprints for action" in accomplishing the goals of the partnership. A good plan defines what is to be accomplished, how it will be accomplished, and when it will happen; and it assigns agents of responsibility to assure that activities take place.

EXAMPLE

Sample work plan is shown in Appendix G.

PROCEDURES

1. Write overall goal(s) statement for partnership.
2. Write specific objectives for fulfilling goal.
3. Review goal and objectives with advisory committee to assure that they are appropriate for business and industry involvement.
4. Plan a set of activities to meet each objective of work plan.
5. Review activities with advisory committee.
6. Revise activities according to advisory committee recommendations.
7. Identify the starting and completion dates for each activity in the plan of work.

Develop a Plan of Work (cont.)

PROCEDURES (cont.)

8. Assign a person to be responsible for each activity in the plan of work.

9. Review assignments with responsibility agents to confirm their willingness to accept assignments.

Conduct Activities of the Plan

CONCEPT

#16

Plans are only worthwhile when properly implemented.

EXPLANATION OF CONCEPT

Many well developed plans are never implemented and thus are worthless. Plans can be of great value if implemented according to the activity schedule.

EXAMPLES

Most quality vocational programs in Oregon are the result of careful implementation of five year plans. The plans become the focus for industry assistance with program development.

PROCEDURES

1. Schedule planned activities.

2. Observe timelines for activities.

3. Conduct activities as planned.

Monitor the Implementation of Work Plan

CONCEPT

#17

A monitor reminds the partners of their responsibility for project activities and their adherence to the timelines of the plan.

Monitor the Implementation of Work Plan (cont.)

EXPLANATION OF CONCEPT

In a project that involves many activities and partners, someone may be assigned to monitor the plan. The monitor reminds the responsibility agents of planned activities, encourages them to keep timelines, and provides formative evaluation to all partners.

EXAMPLES

The duties of a project manager are listed in Appendix H.

PROCEDURES

1. Review plan on a regular basis.
2. Make telephone reminders to appropriate responsibility agents.
3. Collect formative evaluation data on activities.
4. Provide formative evaluation findings and recommendations to responsibility agents.

MAINTAIN THE PARTNERSHIP

Assess Processes, Outcomes, and Input

CONCEPT

#18

Careful assessment of processes, outcomes, and impact of partnership activities should be made periodically with recommendations for changes in the plan of work.

EXPLANATION OF CONCEPT

Processes are the key to enduring relationships between partners. In most cases, there is room for refinement of processes. Those involved should take time to assess the way things are being done. A determination should be made as to whether a plan is reaching its objectives. The partners should assess the outcomes of their efforts. A joint venture in vocational education may be successful in its processes and its outcomes and yet fail to make an impact on employability of the student.

The impact of a partnership should be assessed through follow-up with graduates and employers. Recommendations that arise from assessments and/or formative evaluations should be sent to everyone in the partnership.

EXAMPLES

A sample form for collecting formative evaluation on activities (processes and outcome assessment) is shown in Appendix I.

Each school can develop its own follow-up questions. Examples of follow-up survey questions for program completers and employers are provided in Appendices J and K.

Assess Processes, Outcomes, and Input (cont.)

PROCEDURES

1. Assess processes used in conducting the activities of the plan.
2. Using the plan, determine to what degree the plan was completed.
3. Assess the level of success of each activity in the plan.
4. Define the outcome for each set of activities.
5. Conduct a follow-up on graduates of vocational programs.
6. Conduct a follow-up with employers of vocational program completors.
7. Assess responses and comments of graduates and employers to see if a true partnership exists.
8. Write recommendations in clear, concise form.
9. Distribute assessment findings and recommendations to all partners involved in that process or activity.

Review, Revise and Update Plan of Work

CONCEPT

#19

The plan of work must be kept up to date if it is to be effective in maintaining the partnership.

EXPLANATION OF CONCEPT

The electricity/electronics industry is a dynamic, ever-changing field with new technologies and emerging occupations. A plan must be current with the industry and its technology.

Review, Revise and Update Plan of Work (cont.)

EXAMPLES

Several examples of education/business/industry/labor partnership efforts are summarized in Appendix L.

PROCEDURES

1. Review recommendations from assessments with advisory committee members.

2. Have advisory committee members suggest revisions to plan.

3. Revise and/or update plan according to recommendations from assessments and suggestions of advisory committee members.

4. Send revised plan of work to all members of the partnership.

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APPENDIX A

GOALS FOR PARTNERSHIP

A partnership must be based on shared goals if the relationship between business, industry, labor and education is to be a positive force in meeting the manpower needs of Oregon. The goals must offer mutual benefits to all partners and be clearly defined in the beginning of the partnership.

Some worthy goals are:

1. To update electronics curriculum to reflect the current technologies of Oregon business and industry.

2. To update instructors in the technical skills needed for teaching an updated curriculum.

3. To provide technical assistance for program development.

4. To assist with the instruction of specialized concepts and skills beyond what can be provided in school classrooms and laboratories.

5. To provide observations and work experiences related to the instructional program.

PROPOSAL FOR SHARING WITH BUSINESS, INDUSTRY AND LABOR

RATIONALE

A dynamic change is taking place in the fields of electricity and electronics. Education cannot keep pace with these rapid technological advances without the assistance of business, industry and labor. Since the new and emerging technologies are arising in the field rather than on the university campuses, education must develop direct linkages with the electrical and electronics firms of the area. Through actual partnerships, both education and industry can contribute to the growth of "high tech" industry in Oregon.

The schools can assist in training a pool of qualified workers for business and industry. Most schools have basic programs and equipment for electronics instruction and a large body of human resource with inquisitive minds. In other words, the schools have the raw material and an organizational structure for developing a strong work force.

Business and industry can contribute to a partnership by providing education with the technological updates needed for operating a modern curriculum. They can become an extension of school by sharing expertise and by allowing students to become exposed to the technologies of their firms. Business and industry can assist by keeping instructors and curriculum up-to-date and by providing a laboratory for student experiences beyond the capabilities of local schools.

POTENTIAL PARTNERSHIP EFFORTS

INSTRUCTIONAL GOALS	INDUSTRY CAN HELP BY:
1. Provide students with an updated curriculum in electricity/electronics.	--Reviewing task checklists. --Recommending curriculum changes. --Providing resource persons to assist instructor in highly specialized areas of curriculum. --Making short term loans of equipment that schools cannot afford to buy.
2. Provide students with opportunity to apply skills in a productive work setting.	--Providing opportunities for students to observe workers on-site. --Proving Cooperative Work Experience opportunities to students. --Providing placement for qualified graduates of electronics programs. --Providing field trip opportunities to observe technology that cannot be obtained in high school setting.

PROPOSAL

It is proposed that business, industry and labor meet with education to determine specific strategies for meeting the two instructional goals. It is recognized that each firm has a specific set of constraints and conditions of working with students. A true partnership will allow the partners to operate from their own framework to accomplish the instructional goals. Likewise, a partnership that is built on the instructional needs of a future workforce will also offer benefits to all partners. The focus of our proposed effort will be student needs rather than school needs or industry needs. Such a partnership, once established, will thrive because it was built on unselfish motives and offers benefits to all of our society.

APPENDIX C

RESOURCE DIRECTORY INFORMATION
COLLECTION INSTRUMENT

Name of Firm _____ Telephone _____

Name and Title of Contact Person _____

Address _____

Firm is willing to assist:

- ☐ Neighborhood school
- ☐ All schools in district

Firm is willing to assist by:

- ☐ Providing guest speakers
- ☐ Hosting field trips
- ☐ Providing work site observation of individual students
- ☐ Providing cooperative work experience training site
- ☐ Serving on program advisory committee
- ☐ Responding to task inventories received through mail

PLEASE COMPLETE THIS SECTION IF YOU ARE WILLING TO PROVIDE ON-SITE EXPERIENCES FOR STUDENTS.

Description of activities (skills, processes) or observations:

_____

_____

Special conditions to be considered when visiting sites:

_____

_____

APPENDIX D

STEPS IN SAMPLE INDENTIFICATION

1. Contact the Oregon Occupational Information Coordinating Council and request employment data on electrical and electronic occupations. Request information by OES and SIC Code listings.

2. Identify key occupations that employ the majority of people in electricity and/or electronics. Use Oregon Employment Statistics Code (OES) instead of the Dictionary of Occupational Titles (DOT) for defining key occupations.

3. Identify Standard Industrial Classifications (SIC) where the majority of people are employed.

4. Computer sample size for (SIC) Group according to relative percentages employed in that group.

5. Identify firms that manufacture products from the Directory of Oregon Manufacturers. (By SIC group)

6. Identify firms and agencies that provide electrical and electronic services by use of the Yellow Pages. (By SIC group)

7. Identify 50% more firms than needed in actual sample. This 50% can be utilized as replacements in those cases where sample firms do not work out or do not wish to cooperate in a partnership effort. It is important that a balanced sample to maintained if total industry representation is a desired outcome.

8. Assess the completed sample to assure that they do employ people of the OES titles or key occupations in electricity and electronics.

APPENDIX E

CHECKLIST FOR ADVISORY COMMITTEE

		CHECK
1.	Selected potential members that represent a cross-section of electrical and electronic occupations and technologies.	___
2.	Visited potential members to discuss the purpose for organizing the committee; role of committee members; and expectations of the education community.	___
3.	Selected advisory committee membership from those with interest, enthusiasm and commitment to a partnership effort.	___
4.	Scheduled and conducted a meeting for orientation and organization of committee.	___
5.	Identify a committee chairperson and secretary.	___
6.	Conduct meetings according to a planned agenda.	___
7.	Keep minutes on action items and recommendations made in meetings.	___
8.	Follow-up on meeting by mailing minutes to each member.	___
9.	Recognize the efforts of advisory committee members through public recognition at awards programs, in news articles and other forms of expressed appreciation for their contribution.	___

APPENDIX F

No._____

ORAL INTERVIEW GUIDE

1. What job titles (electricity/electronics) are represented in your firm? (Check job titles against OES Code list. List local job titles and OES titles.)

2. How many employees in <u>your</u> firm have previous training in electricity/electronics?

3. Which of the job titles require preparation training for job entry?

4. Which positions require training for job advancement and/or retention?

5. Where have most of your current employees received their training?

OJT _____
Apprenticeship _____
High School _____
Community College _____
Tech Trade School _____

In-State _____
Out-of-State _____
Family Training _____
Other _____

6. What specific technical skills seem to be missing in the people that come to work for your firm?

7. What related skills and knowledges are most necessary for successful employment in your firm?

Read _____	Speak _____	Other _____
Write _____	Listen _____	_____
Analyze _____	Computer _____	_____

8. What personal traits are most important for successful employment in your firm?

Honesty _____	Safe Working Attitude _____
Punctuality _____	Other: (Please Specify) _____
Getting Along with Others _____	_____
Responsibility _____	_____

9. To what extent does your firm offer training programs for continuous updating and upgrading for employee skills?

10. If Portland School District develops an industry-based curriculum in electricity/electronics, would your firm be willing to hire qualified graduates of such a program? Identify <u>restrictions</u> and <u>constraints</u>.

    a. Would you hire handicapped workers?

    b. Would you hire women?

11. What types of preparation training should be emphasized in a high school program?

    Technical Skills _____
    Related Skills (i.e., drafting) _____
    Other _____

    _____

12. What are the end products of your firm?

13. Does your "crystal ball" foresee new and emerging technologies in electricity/electronics that should be included in a program?

14. Will this result in new jobs being created? If yes, describe the new jobs.

15. Would you be interested in providing further assistance toward the development of an industry-based curriculum in electricity/electronics for Portland School District? If yes, specify.

- Allow employee to respond to task inventory ___
- Advisory group to verify skills to be taught in curriculum ___
- Assist with a task analyses by mail (Delphi) ___
- Provide observation site for student ___
- Provide resource persons for school or at work site ___
- Provide resource persons for school or at work site ___

EXAMPLE PLAN OF WORK

GOAL: 1.0 Improve Electrical/Electronics programs in Portland Public Schools.

Objectives	Activities	Timeline	Responsibility Agent
1.1 Review and update curriculum annually.	1.1.1 Utilize committees of business, industry, labor and education representatives to review task inventory checklists.	March 1983	Partnership Committee
	1.1.2 Identify obsolete and low-priority tasks to be deleted from curriculum.	March 1983	Partnership Committee
	1.1.3 Add new tasks from new and emerging technologies to be added to curriculum.	March 1983	Partnership Committee
1.2 Provide community-based experiences for students.	1.2.1 Identify community sites for students to observe workers performing electrical and electronic jobs.	September 1983	Partnership Committee
	1.2.2 Identify sites for CWE students to obtain job experience.	November 1983	Partnership Committee
	1.2.3 Identify field trip opportunities for students.	January 1984	Partnership Committee
	1.2.4 Identify resource persons that are willing to come into classrooms.	March 1984	Partnership Committee

DUTIES OF A PROJECT MONITOR

1. A project monitor assures that project timelines are met in an orderly and sequential manner.

2. A project monitor assures that the intent of the project plan is carried out.

3. A project monitor alerts project staff to the need for action by individuals or groups.

4. A project monitor assures that proper evaluations are made and that the results are utilized for improving the project.

5. A project monitor acts as the "conscience" for successful completion of a project.

6. A project monitor serves as a communication bridge between all participants of a project by supplying needed information on project matters and feedback on evaluations.

7. A project monitor assures that the project is operated within the fiscal constraints of the budget.

APPENDIX I

FORMATIVE EVALUATION COLLECTION

1. Are planned objectives being met?

2. Are the activities and strategies appropriate for meeting the planned objectives?

3. Is the communication between partners open and effective?

4. Are activities being conducted according to planned timelines?

5. What is the impact of the partnership effort?

6. What modifications are needed for improving the quality and effectiveness of the partnership efforts?

APPENDIX J

FOLLOW-UP SURVEY

1. Is your current job related to your field of training?

___ 1. Yes, it is directly or closely related.
___ 2. No, very little relationship to training.

EMPLOYER NAME: _____

EMPLOYER ADDRESS: _____

2. How well did your training prepare you for your present job?

___ 1. Very well prepared.
___ 2. Adequately prepared.
___ 3. Poorly prepared.

3. How necessary was your training in getting your present job?

___ 1. Required.
___ 2. Very helpful.
___ 3. Of some help.
___ 4. No help at all.

4. How did you find out about your first job upon leaving high school?

___ 1. Through my advisor.
___ 2. Placement service at high school.
___ 3. Through an instructor.
___ 4. Newspaper.
___ 5. Friend.
___ 6. Other. (Specify)

5. How do you rate the following services provided by your high school?

	PLEASE CIRCLE		
SERVICE	Very Good	Adequate	Poor
Vocational/Skills Training	3	2	1
Career Guidance	3	2	1
Student Activities	3	2	1
Job Placement	3	2	1

6. What were the strong features of your training in high school? (Be specific)

7. What were the weak features of your training in high school? (Be specific)

APPENDIX K

EMPLOYER FOLLOW-UP

Name of Employer _____

Address of Employer _____

GENERAL QUESTIONS

Please rate the following skills of our graduates that are working for you at the present time. Circle most appropriate answer.

Skills	Has All Needed Skills	Has Some Skills	Has None of Skills Needed
1. Mathematics skills	3	2	1
2. Technical skills of the job	3	2	1
3. Communication skills of the job	3	2	1
4. Safety procedures	3	2	1
5. Work quantity (output)	3	2	1
6. Work quality	3	2	1
7. Work attitude	3	2	1
8. Preparation and training for job	3	2	1

COMMENTS:

SPECIFIC QUESTIONS

The following questions are specifically related to the technical training of employees received at our school. Please circle the appropriate answer.

Question	Yes	Some of the Time	No
9. Did the employee have needed technical skills for entry level into your firm?	3	2	1
10. Does employee use his knowledge of shop safety and tool handling?	3	2	1
11. Does employee practice care and maintenance of equipment?	3	2	1
12. Did the employment of these persons depend upon them having had training at our school?	3	2	1
13. Can the employee read blueprints and use measuring tools for completing work?	3	2	1
14. Can the employee work on his own without supervision?	3	2	1

15. What would your identify as the <u>strong points</u> in this employee's technical training?

_____

_____

_____

16. What would you identify as <u>weak points</u> in this employee's technical training?

_____

_____

_____

17. Since this survey is to help improve vocational training programs, we welcome ideas and comments on how this can best be accomplished.

_____

_____

_____

_____

_____

_____

THANK YOU FOR YOUR ASSISTANCE WITH THIS SURVEY. WOULD YOU LIKE TO SEE THE RESULTS OF THE SURVEY WHEN IT IS COMPLETED?

___ Yes ___ No

APPENDIX L

EXAMPLES OF PARTNERSHIP EFFORTS

Individual school districts and regions of Oregon have worked toward partnerships with their business, industry and labor sectors. Some good examples of partnership efforts can be found in the locations listed below. Further information can be obtained from the contracts in each location.

LOCATION AND CONTACT	NATURE OF PARTNERSHIP
Beaverton School Dist. Contact: Ken Box Telephone: 649-0465	Involvement of business, industry and labor in development of model programs in accounting and construction.
David Douglas High School Contact: Tina Ainslie Telephone: 254-5521	Partnership with Apprenticeship that assists students in moving from high school into apprenticeship programs.
Jackson Education Service Dist. Contact: Nat Etzel Telephone: 776-8593	Partnership through CE_2 program, apprenticeship and CETA linkages.
Lane Education Service Dist. Contact: Marv Clemons Telephone: 689-6500	On-going planning forums and inservice that involve apprenticeship, CETA, community college and secondary schools.
Portland Public Schools Contact: Carol Matarazzo Telephone: 239-6851	Involvement of business, industry and labor in development of an electrical/ electronics model program.
Umatilla Education Service Dist. Contact: Sam Pambrun Telephone: 276-6616	Involves a regional advisory committee that plans for vocational needs of region and involves all segments of business, industry, labor, education and governmental agencies.
Washington Education Service Dist. Contact: John Pendergrass Telephone: 645-4242	Industry involvement in providing "high tech" inservice to school administrators, counselors and instructors.